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Two new species of *Phasmatorcoris* Breddin from Brazil, and description of the male of *Phasmatorcoris borgmeieri* (Wygodzinsky) (Hemiptera: Heteroptera: Reduviidae: Emesinae)

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Abstract

Phasmatorcoris catarinae sp. nov. and *P. galvaei* sp. nov. (Hemiptera: Heteroptera: Reduviidae: Emesinae: Emesini) are described from Brazil based on female and male specimens. The male of *Phasmatorcoris borgmeieri* (Wygodzinsky, 1945) is described and short taxonomical notes on this species and *P. xavieri* Gil-Santana *et al.*, 2007 are provided.

Key words: arachnophilous association, cave, Emesini, Neotropical Region, new species

Introduction

Wygodzinsky (1966) provided a detailed generic level redescription of *Phasmatorcoris* Breddin, 1904, and recognized *Rothbergia* McAtee & Malloch, 1925 and *Myiagreutes* Bergroth, 1911 as junior synonyms of the former genus. Currently, *Phasmatorcoris* contains 15 described species, of which five are known from Brazil (Wygodzinsky 1966, Maldonado 1990, Gil-Santana *et al.* 2007, Pape 2013). Wygodzinsky (1966) stressed the wide range of habitats in which the various species can be found, ranging from tropical rainforests of the eastern slope of the Andes and the Amazon region to semi-arid regions (Wygodzinsky 1966).

Several emesines are occasionally or consistently found in caves. Some species are partially or entirely cave-dwelling animals (Wygodzinsky 1966, Pape 2013). A thorough summary of the literature and a discussion on the known ecology and biology of emesines found or living in caves were recently provided by Pape (2013). Only two species of *Phasmatorcoris* have been regarded as cavernicolous so far: *P. xavieri* Gil-Santana, Alves, Barrett & Costa, 2007 and *P. labyrinthicus* Pape, 2013 (Gil-Santana *et al.* 2007, Pape 2013). While Gil-Santana *et al.* (2007) argued that the pale general coloration of *P. xavieri* could perhaps be related to its habitat inside caves with little or no light, Pape (2013) claimed that *P. labyrinthicus* showed no obvious morphological adaptation to life in caves, and that ecological evidence suggested that it would be at most, a cave-limited troglophile.

The dorsal surface of the fore tibiae of many emesines presents a group of serially arranged and obliquely inclined stiff bristles of greater or lesser extent, which somewhat resembles the calamistrum of cribellate spiders. These spiders use the calamistrum as a carding apparatus. The existence of this calamistrum-like structure in the frequently arachnophilous Emesinae is suggestive of a comparable function for this organ (Wygodzinsky 1966). This latter author furnished a comparative table of the relative position of the calamistrum-like structure on the fore tibiae among 19 species belonging to four tribes in Emesinae, including *Phasmatorcoris minor* (McAtee & Malloch, 1925) and *P. praecellens* (Bergroth, 1911).

Forero (2006) described a depression on the dorsal surface of the fore tibiae, covered with medium-sized dense setae, in *Phasmatorcoris spectrum* Breddin, 1904, and pointed out that this character was not mentioned by Wygodzinsky (1966).

Pape (2013) furnished a detailed description of the vestiture of the fore tibiae in *P. labyrinthicus*. In addition to the calamistrum-like brush formed by a clustered stiff setae on the dorsal excavation of the fore tibiae, Pape (2013) highlighted a lateral, parallel auxiliary row of a few setae (a dozen in *P. labyrinthicus*) along the apical two thirds of